

<p>2002-231316/29 A14 F01 CHCC 2000.05.22          CHISSO CORP JP 2001329432-A          2000.05.22 2000-150113(+2000JP-150113) (2001.11.27) D01F 8/06,          A61F 13/15, D02G 3/04, D04H 1/54, 1/42, A61F 13/53 // A61F 5/44  <b>Therm bonding comp site fiber used for non-woven fabric, contains cellul se fiber and poly lefin fiber which has graft c p lymerizable denatured poly lefin and high melting point resin, and has preset crimp number C2002-070440</b></p>	<p>A(4-G1B, 10-E1, 11-C5A, 12-S5B, 12-S5G) F(2-C1, 2-C2, 2-C2B)</p>
<p><b>NOVELTY</b>          A thermobonding composite fiber of unusual shape cross-section, has cellulose and polyolefin group fibers. The polyolefin group fiber comprises component (A) having denatured polyolefin which is graft copolymerizable with vinyl monomer, and component (B) having high melting point resin. The composite fiber has single yarn size of 0.5-50 dtex, fiber length of 3-25 mm and crimp number of 5-30 pieces/2.54 cm.</p> <p><b>DETAILED DESCRIPTION</b>          A thermobonding composite fiber of unusual shape cross-section, contains a cellulose group fiber and a polyolefin group fiber. The polyolefin group fiber comprises component (A,B). The component</p>	<p>(A) comprises denatured polyolefin which is graft copolymerizable with vinyl monomer having unsaturated carboxylic acid or its anhydride. The component (A) contains 0.05-2 mols/kg of denatured polyolefin as denaturing agent. The component (B) has resin having melting point higher than that of the component (A). The dropping rate of the cellulose group fiber is 15% or less. The thermobonding composite fiber has single yarn size of 0.5-50 dtex, fiber length of 3-25 mm and crimp number of 5-30 pieces/2.54 cm. <b>INDEPENDENT CLAIMS</b> are also included for the following: (i) Fiber assembly which is obtained by blending the composite fiber and the cellulose group fiber by air-laid method; (ii) Non-woven fabric which is obtained by heat-processing the fiber assembly followed by heat bonding the fiber intersection of the composite fiber.</p> <p><b>USE</b>          Used for fiber assembly to form non-woven fabrics such as wipers and absorbers (claimed).</p> <p><b>ADVANTAGE</b></p> <p>JP 2001329432-A+</p>
<p>The thermobonding composite fiber having unusual shape cross-section, has high workability. The peeling of the cellulose group fiber, is prevented. The non-woven fabric has high specific volume and softness. The non-woven fabric when used for wipers, has excellent absorption characteristics.</p> <p><b>EXAMPLE</b>          Polyethylene and polypropylene (in weight ratio of 6:4) were passed to unusual shaped spinning hole. Spinning of composite fiber was carried out using sheath core type or parallel type spinneret at 250°C. A thermobonding composite fiber having single yarn size of 2 dtex and crimp number of 12 pieces/2.54 cm, was obtained. The thermobonding composite fiber was cut into 10 mm length. The obtained composite fiber and cellulose fiber were blended in a weight ratio of 10:90. A fiber assembly was obtained using the blend by air-laid method. The fiber assembly was heat-processed at 138°C to form a non-woven fabric. The non-woven fabric had fabric weight of 80 g/m<sup>2</sup> and specific volume of 49.2 cm<sup>3</sup>/g. The dropping rate of cellulose group fiber was 13.2%.</p> <p><b>TECHNOLOGY FOCUS</b>          Organic Chemistry - Preferred Denaturing Agent: The denaturing</p>	<p>agent is maleic anhydride, acrylic acid or methacrylic acid, especially maleic anhydride obtained from styrene, acrylate or methacrylate ester.</p> <p>Textiles And Paper - Preferred Process: The fiber assembly and the other fiber assembly are laminated, and heat bonding of the thermobonding fiber is performed to form the non-woven fabric or the fiber assembly is laminated with other sheet followed by heat bonding of the thermobonding fiber to form non-woven fabric.          (8pp3198DwgNo.0/0)</p> <p>JP 2001329432-A</p>